

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



United States  
Environmental Protection  
Agency

Office of Pesticide Programs

**MEMORANDUM**

7/6/2020

**SUBJECT:** Product Chemistry Review for **BIOCIDE ADBAC 80**, EPA Reg. No.: 90924-RT

**FROM:** Narayanan Parthasarathy  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

**THRU:** Karen P. Hicks, Team Leader  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

10/26/2020.

**TO:** Eric Miederhoff, PM Team 31 / Karen Leavy  
Regulatory Management Branch I  
Antimicrobials Division (7510P)

Registrant: CHAMPIONX  
LLC  
Action code: A565  
Agency Due Date:  
7/6/2021  
DP No.: 458181  
Submission No.: 1047797  
E-Sub No.: 47002  
Classification: MUP  
Process: Integrated  
system  
Pesticide type:  
Disinfectant

MRID(s):51027502, 51027504, 51027505 & 44467403 (Cited)

Formulation from label			
PC code(s)	CAS #(s)	Active Ingredient(s)	% weight
069105	68424-85-1	Alkyl* (50% C <sub>14</sub> , 40% C <sub>12</sub> , 10% C <sub>16</sub> ) Dimethyl Benzyl Ammonium Chloride	80.0%
		Other Ingredients	20.0%
		Total	100.0%

## I. BACKGROUND

The Registrant, CHAMPIONX LLC, has submitted an application for pesticide registration for their product: BIOCIDE ADBAC 80, EPA Reg. No. 90924-RT. The product is formulated as a new manufacturing-use (Action Code A565), integrated, non-food use disinfectant.

## II. RELEVANT DOCUMENTS

	RECEIVED	N/A
EPA FORM 8570-27 – Formulator’s Exemption Statement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EPA FORM 8570-35 – Data Matrix (2/18/2020)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cover letter (2/18/2020)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmittal document	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed CSF BASIC, (6/30/2020)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed CSF ALTERNATE 1, (2/18/2020)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposed label, (2/18/2020)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Certification for Pilot Fragrance Notification Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
REFERENCED: CSF	--	
Comments:		

## III. FINDINGS

### a. Product Formulation:

	TGAI	MUP	EUP	Food use	Non-food use
Non-integrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Integrated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Active Ingredients(s)			Nominal	Upper limit	Lower limit
Alkyl* (50% C <sub>14</sub> , 40% C <sub>12</sub> , 10% C <sub>16</sub> ) Dimethyl Benzyl Ammonium Chloride			80.0%	82.4%	77.6%

	YES	NO	N/A
1. The certified limits of all ingredients are within 40 CFR standard certified limits.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Wider certified limits were requested, and rationale was accepted.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. The nominal concentration(s) of the active ingredient is in agreement with the label.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. The chemical IDs and analytical information for density, pH, and flammability are consistent with Series 830 Group B data.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. All inert ingredients are approved for non-food use pesticide formulations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The impurities present >0.1% are identified.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Impurities of toxicological significance have an upper certified limit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b. Product Label:

	Yes	NO	N/A
<i>The formula contains one of the following:</i>			
1. 10% or more of petroleum distillate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. 1.0% or more of methyl alcohol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sodium nitrite at any level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. A toxic list 1 inert at any level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Arsenic in any form	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. If yes to 1-5, then the inert ingredient list contains a relevant footnote	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Appropriate warning statements regarding flammability or explosive characteristics of the product are included on the label	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The storage and disposal instructions for the pesticide container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The product requires an expiration date at which time the nominal concentration falls below the lower certified limit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IV. Additional Findings

1. Basic CSF (6/30/2020) and Alt CSF #1 (2/18/2020) are acceptable.
2. Proposed product BIOCIDE ADBAC 80 is very closely similar in composition to the test substance in ADBAC RED "Reregistration Eligibility Decision for Alkyl Dimethyl Benzyl Ammonium Chloride (ADBAC)" – Aug 2006 and the registrant is citing MRID 44467403

to satisfy Product Chemistry Group B data requirements (830. 6302, 830.6303, 830.6304, 830.6315, 830. 6317, 830.6320, 830.7000, 830. 7100, and 830.7300 guidelines). The registrant had also satisfied other Group B guidelines (see VI Table B). The registrant had provided data to satisfy Product Chemistry Group A 830 guidelines. In summary, the registrant had met Product Chemistry Group A and B 830 guidelines toward the registration of manufacturing-use, integrated, non-food use disinfectant, BIOCIDE ADBAC 80, EPA Reg. No. 90924-RT.

#### **V. Conclusion**

Basic CSF (6/30/2020) and Alt CSF #1 (2/18/2020) are acceptable. The registrant had met Product Chemistry Group A and Group B 830 guidelines including Storage Stability (830.6317 guideline) and Corrosion Characteristics (830.6320 guideline) toward the registration of manufacturing-use, integrated, non-food use disinfectant, BIOCIDE ADBAC 80, EPA Reg. No. 90924-RT.

**VI. Table A:****Series 830 guidelines – Group A**

OPPTS#	Name	Status	MRID
830.1550	Product Identity & Composition	Acceptable	51027502, updated 6/30/2020
830.1600	Description of materials	Acceptable	51027502, updated 6/30/2020, Basic CSF
830.1620	Description of production process	Not required	N/A
830.1650	Description of formulation process	Acceptable	51027502, updated 6/30/2020
830.1670	Discussion of formation of impurities	Acceptable	51027502, updated 6/30/2020
830.1700	Preliminary analysis	Acceptable. Five Batch Analysis of Mean Quat Concentration is 80.930%, 80.762%, 80.853%, 80.838% and 80.602% (triplicate analysis)	51027504
830.1750	Certified limits	Acceptable	51027502, updated 6/30/2020
830.1800	Enforcement analytical method	Acceptable	51027505
830.1900	Submittal of samples	Waived	51027502, updated 6/30/2020

**VII. Table B: Series 830 guidelines – Group B**

OPPTS#	Name	Study Findings/Comment	Status	MRID								
830.6302	Color	APHA color 50	Acceptable	44467403 (ADBAC RED)								
830.6303	Physical state	liquid	Acceptable	44467403 (ADBAC RED)								
830.6304	Odor	Ethanollic odor	Acceptable	44467403 (ADBAC RED)								
830.6313	Stability to normal & elevated temperatures, metals & metal ions	The product is not TGA1	Not applicable	N/A								
830.6314	Oxidation/Reduction	Product does not contain an oxidizing or reducing agent	Not applicable	N/A								
830.6315	Flammability	Flash point is 37deg C = 98.6 deg F, COMBUSTIBLE	Acceptable	44467403 (ADBAC RED)								
830.6316	Explodability	Not potentially explosive	Not applicable	N/A								
830.6317	Storage stability	Accelerated Storage Stability of the cited product in RED was carried out at 54 deg C. The product was stored in a HDPE container for 14days. Total QUAT content was determined initially and after storage. <table><tr><td>Interval</td><td>QUAT CONTENT %</td></tr><tr><td>Initial</td><td>81.88</td></tr><tr><td>14-Day</td><td>81.32</td></tr><tr><td colspan="2">After Storage for 14-days nominal concentration of QUAT is still above the lower certified limit</td></tr></table>	Interval	QUAT CONTENT %	Initial	81.88	14-Day	81.32	After Storage for 14-days nominal concentration of QUAT is still above the lower certified limit		Acceptable	44467403 (ADBAC RED)
Interval	QUAT CONTENT %											
Initial	81.88											
14-Day	81.32											
After Storage for 14-days nominal concentration of QUAT is still above the lower certified limit												
830.6319	Miscibility	Product not mixed with organic solvents	Not applicable	N/A								
830.6320	Corrosion characteristics	No corrosion of the HDPE container	Acceptable	44467403 (ADBAC RED)								
830.6321	Dielectric breakdown voltage	Product not used near electrical equipment	Not applicable	N/A								
830.7000	pH	7,59 at 25 deg C	Acceptable	44467403 (ADBAC RED)								
830.7050	UV/Visible absorption	Not required for MUP or EP	Not applicable	N/A								

830.7100	Viscosity	507.0 cSt at 25 deg C	Acceptable	44467403 (ADBAC RED)
830.7200	Melting point	Not required for MUP or EP	Not applicable	N/A
830.7220	Boiling point	Not required for MUP or EP	Not applicable	N/A
830.7300	Density/relative	Specific Gravity = 0.9429 at 24 deg C	Acceptable	44467403 (ADBAC RED)
830.7370	Dissociation constants in water	Not required for MUP or EP	Not applicable	N/A
830.7520	Particle size	Not required for MUP or EP	Not applicable	N/A
830.7550/ 7560/ 7570	Partition coefficient	Not required for MUP or EP	Not applicable	N/A
830.7840/ 7860	Water solubility	Not required for MUP or EP	Not acceptable	N/A
830.7950	Vapor pressure	Not required for MUP or EP	Not applicable	N/A

CONFIDENTIAL APPENDIX  
(INTERNAL USE ONLY)



